

Risk Management Handbook



U.S. Department
of Transportation
Federal Aviation
Administration



Certification, Training, and Experience Summary	
Certification Level (e.g., private, commercial, ATP)	
Certificate level (e.g., private, commercial, ATP)	
Ratings (e.g., instrument, multiengine)	
Endorsements (e.g., complex, high performance, high altitude)	
Training Summary	
Flight review (e.g., certificate, rating, Wings)	
Proficiency Check (e.g., certificate, rating, Wings)	
Checkout in airplane 1	
Checkout in airplane 2	
Checkout in airplane 3	

Risk Management Handbook

2009

U.S. Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Flight Standards Service

Preface

This handbook is a tool designed to help recognize and manage risk. It provides a higher level of training to the pilot in command (PIC) who wishes to aspire to a greater understanding of the aviation environment and become a better pilot. This handbook is for pilots of all aircraft from Weight-Shift Control (WSC) to a Piper Cub, a Twin Beechcraft, or a Boeing 747. A pilot's continued interest in building skills is paramount for safe flight and can assist in rising above the challenges which face pilots of all backgrounds.

Some basic tools are provided in this handbook for developing a competent evaluation of one's surroundings that allows for assessing risk and thereby managing it in a positive manner. Risk management is examined by reviewing the components that affect risk thereby allowing the pilot to be better prepared to mitigate risk.

The pilot's work requirements vary depending on the mode of flight. As for a driver transitioning from an interstate onto the city streets of New York, the tasks increase significantly during the landing phase, creating greater risk to the pilot and warranting actions that require greater precision and attention. This handbook attempts to bring forward methods a pilot can use in managing the workloads, making the environment safer for the pilot and the passengers. *[Figure I-1]*

This handbook may be purchased from the Superintendent of Documents, United States Government Printing Office (GPO), Washington, DC 20402-9325, or from the GPO website at <http://bookstore.gpo.gov>.

This handbook is also available for download, in PDF format, from the Regulatory Support Division (AFS-600) website at <http://www.faa.gov>.

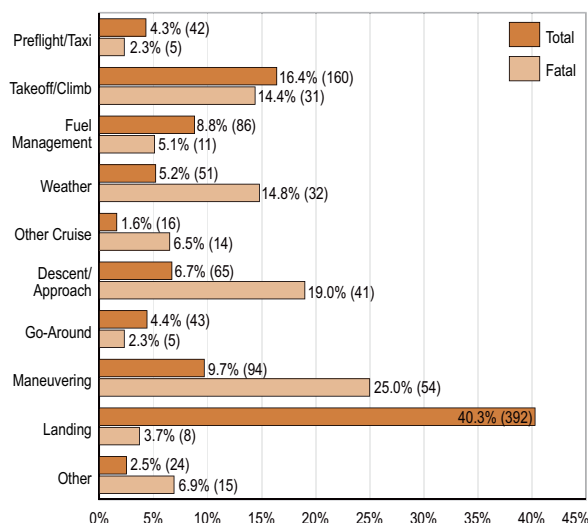


Figure I-1. *The percentage of aviation accidents by phase of flight.*

Occasionally, the word “must” or similar language is used where the desired action is deemed critical. The use of such language is not intended to add to, interpret, or relieve a duty imposed by Title 14 of the Code of Federal Regulations (14 CFR).

Comments regarding this publication should be sent, in email form, to the following address:

AFS630comments@faa.gov

Introduction

According to National Transportation Board (NTSB) statistics, in the last 20 years, approximately 85 percent of aviation accidents have been caused by “pilot error.” Many of these accidents are the result of the tendency to focus flight training on the physical aspects of flying the aircraft by teaching the student pilot enough aeronautical knowledge and skill to pass the written and practical tests. Risk management is ignored, with sometimes fatal results. The certificated flight instructor (CFI) who integrates risk management into flight training teaches aspiring pilots how to be more aware of potential risks in flying, how to clearly identify those risks, and how to manage them successfully.

“A key element of risk decision-making is determining if the risk is justified.”

The risks involved with flying are quite different from those experienced in daily activities. Managing these risks requires a conscious effort and established standards (or a maximum risk threshold). Pilots who practice effective risk management have predetermined personal standards and have formed habit patterns and checklists to incorporate them.

If the procedures and techniques described in this handbook are taught and employed, pilots will have tools to determine the risks of a flight and manage them successfully. The goal is to reduce the general aviation accident rate involving poor risk management. Pilots who make a habit of using risk management tools will find their flights considerably more enjoyable and less stressful for themselves and their passengers. In addition, some aircraft insurance companies reduce insurance rates after a pilot completes a formal risk management course.

This Risk Management Handbook makes available recommended tools for determining and assessing risk in order to make the safest possible flight with the least amount of risk. The appendices at the end of this handbook contain checklists and scenarios to aid in risk management consideration, flight planning, and training.

Acknowledgments

The Risk Management Handbook was produced by the Federal Aviation Administration (FAA) with the assistance of Safety Research Corporation of America. The FAA wishes to acknowledge the following contributors:

Dr. Pat Veillette for information used on human behaviors (chapter 2)

Cessna Aircraft Company and Garmin Ltd. for images provided and used throughout the Handbook

Additional appreciation is extended to the Aircraft Owners and Pilots Association (AOPA), the AOPA Air Safety Foundation, and the National Business Aviation Association (NBAA) for their technical support and input.

